APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/693,232	10/19/2000	Oscar E. Agazzi	36979/FLC/B600	8577

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EXAMINER
TSEGAYE, SABA

ART UNIT	PAPER NUMBER
2662	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/693,232	Applicant(s) AGAZZI ET AL.
	Examiner Saba Tsegaye	Art Unit 2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 5-12, 17-24 and 29-35 are rejected under 35 U.S.C. 102(b) as being anticipated by

I'Anson et al. (US 5,347,524).

Regarding claims 5, 9, 17, 21, 29 and 33 I'Anson discloses, in Fig. 4, a data processing

system (10) adapted to diagnose an adaptive system operably coupled to external systems

wherein the adaptive system is controlled by a state machine comprising:

a processor (17); and

a memory (18) operable coupled to the processor (17) and having program instructions

stored therein, the processor (17) being operable to execute the program instructions, the

program instructions including:

reading a plurality of expected state machine sequences (column 6, lines 48-61; column

7, lines 52-64);

recording a state machine sequence from the state machine (column 6, line 62-column 7,

line 10);

selecting from the plurality of expected state machine sequences a selected expected state

machine sequence that matches the state machine sequence (column 7, lines 11-22); and

determining the status of the adaptive system based on the selected expected state machine sequence(column 7, lines 23-30).

Regarding claims 6, 10, 18, 22, 30 and 34 , I'Anson discloses the method wherein the plurality of expected state machine sequences are normalized based on a sample frequency of the state machine sequence (column 7, lines 19-21).

Regarding claims 7, 12, 19, 23, 31 and 35, I'Anson discloses the method wherein an approximate string matching algorithm is used to match the selected expected state machine sequence and the state machine sequence (column 7, lines 11-14).

Regarding claims 8, 20 and 32, I'Anson discloses the method wherein determining the status of the adaptive system further includes:

obtaining adaptive data from the adaptive system (column 6, lines 48-61); and

determining the status of the external systems using the adaptive data (column 7, lines 11-14).

Regarding claims 11 and 24, I'Anson discloses the method wherein the state machine sequence is recorded by the state machine (column 7, lines 19-21).

3.   Claims 4, 16 and 28 rejected under 35 U.S.C. 102(b) as being anticipated by Goodson et al. (US 5,636,244).

Goodson discloses, in Figs. 2, 6, 7, a method for determining the quality of a communications channel operably coupled to a communications transceiver containing an adaptive filters, comprising:

a processor (107); and

a memory operably coupled to the processor and having program instructions stored

therein, the processor being operable to execute the program instructions (column 3, lines 47-60),

the program instructions including;

reading a plurality of filter coefficients from the adaptive filters (column 5, lines 14-20);

calculating a communications channel pulse response using the plurality of filter

coefficients (column 5, lines 14-65);

calculating a communications channel frequency response using the communications

channel pulse response and applying an inverse Fourier transform (column 6, lines 35-50);

calculating a communications channel transfer function by dividing the communications

channel frequency response by a Fourier transform of a transmitted pulse (column 6, line 35-

columnn 7, line 10); and

comparing the communications channel transfer function to a standard communications

channel transfer function (column 7, lines 12-60).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1, 13 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

I'Anson in view of Szechenyi (US 4,547,633).

I'Anson discloses all the claim limitations as stated above, except for: reading a plurality

filter coefficients, calculating the quality of the communications channel using the plurality of

filter coefficients and diagnosing faults based on the plurality of filter coefficients.

Szechenyi teaches a method and circuit for locating faults in a digital telecommunication

subscriber termination by comparing coefficients determined during a fault with coefficients

determined when the subscriber termination is operating faultlessly.

It would have been obvious to one ordinary skill in the art at the time the invention was

made to add a method that calculates the quality of the communications channel using the

plurality of filter coefficients, such as that suggested by Szechenyi, in the method of I'Anson in

order to localize the location of fault by way of comparing the continuous coefficients with the

stored coefficients.

6.   Claims 2, 3, 14, 15, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable

over I'Anson in view of Szechenyi as applied to claims 1, 13 and 25 above, and further in view

of Goodson et al.

I'Anson in view of Szechenyi discloses all the claim limitations as stated above, except

for a Fourier transform and inverse Fourier transform.

Goodson teaches that Fourier Transform is utilized to convert a received training signal

to a frequency domain and inverse Fourier transform is utilized to convert an inverse channel

frequency characteristic to the finite impulse response characteristic of the inverse frequency

response of the channel.

It would have been obvious to one ordinary skill in the art at the time the invention was

made to apply a Fourier transform and inverse Fourier transform in the method of I'Anson in

view of Szechenyi in order to convert the sampled signal to the frequency domain and vice verse.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Zuranski et al. (US 6,445,733) discloses a method of and apparatus for performing

line characterization in a non-idle mode in a subscriber line communication system .

Williams (US 5,990,687) discloses a system for determining if there is a break in the

shield of coaxial cable plant by inducing a reference test signal onto the sheath or outer

conductor conductor of a coaxial cable.

Amino et al. (US 4,951,269) discloses an echo canceller with short processing delay and

decreased multiplication number.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Saba Tsegaye whose telephone number is (703) 308-4754. The

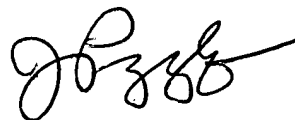examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
January 30, 2004

JOHN PEZZLO
PRIMARY EXAMINER